

Claims:

1. A method for transmitting a location-based message, wherein for the message at least one recipient is defined, and the message is transmitted from a wireless communication device of a sender to a wireless communication device of one or more said recipients, and the method comprises at least the following steps:

- a positioning step for positioning the sender's wireless communication device,
- a range definition step for defining the message transmission range,
- a detection step for detecting whether the recipient of the message is located within the message transmission range, and
- a presentation step, wherein the message is presented in the wireless communication device of the recipient, in case said recipient of the message is located within the message transmission range.

2. The method according to claim 1, wherein a limited group of recipients is defined as the recipient of the message.

3. The method according to claim 1, wherein anyone located within the message transmission range is defined as the recipient of the message.

4. The method according to claim 1, wherein a validity period for the message is also defined in the method.

5. A method according to claim 1, in which messages are transmitted in at least one wireless communication system, and said communication system is provided with at least one data base into which the messages to be transmitted are stored at said storage step.

6. The method according to claim 1, wherein the location-based message is stored into the recipient's wireless communication device to be presented in said presentation step.

7. The method according to claim 1, in which the sender's wireless communication device comprises a mobile communication device of a mobile communication system, and in which mobile communication system at least one base station is used in order to arrange communication between the wireless communication device and the mobile communication system, and in said positioning step the sender is positioned on the basis of said base station.

8. The method according to claim 7, wherein the message transmission range is defined to be that area of the base station within which the wireless communication device of the sender communicates.

9. The method according to claim 7, wherein the message transmission area is defined to be the area of all those base stations transmitting a signal that can be received by the sender's wireless communication device.

10. The method according to claim 1, wherein the positioning of the sender is performed by using a satellite positioning system.

11. The method according to claim 1, in which a communication connection is set up from the sender's wireless communication device to a wireless local area network, and the sender is positioned by using the wireless local area network.

12. The method according to claim 1, in which the sender's wireless communication device comprises wireless local communication means, and the sender is positioned by using said wireless local communication means.

13. The method according to claim 1, wherein a certain geographical area is defined as the message transmission range.

14. The method according to claim 1, wherein said detection step is repeated at intervals.

15. The method according to claim 1, wherein said detection phase is performed upon setting up a communication connection between the recipient's wireless communication device and the base station.

5 16. A system for transmitting a location-based message, which system comprises means for determining the recipient of the message, and means for transmitting the message from a sender's wireless communication device to a wireless communication device of one or more said recipients, and the system further comprises at least:

- 10 - positioning means for positioning the sender's wireless communication device,  
- range definition means for defining the message transmission range,  
15 - detection means for detecting whether the recipient of the message is located within the message transmission range, and  
- presentation means for presenting the message in the recipient's wireless communication device, in case said recipient of the message is located within the message transmission range.

20 17. The system according to claim 16, which further comprises means for detecting the validity time of the message.

25 18. The system according to claim 16 comprising at least one mobile communication system comprising at least one base station for setting up a communication connection between the wireless communication device and the mobile communication system, and the system further comprises means for positioning the sender on the basis of at least one said base station.

30 19. The system according to claim 16 comprising a satellite positioning system, and means for positioning the sender by means of said satellite positioning system.

35 20. The system according to claim 16 comprising a wireless local area network, and means for positioning the sender by means of said wireless local area network.

21. The system according to claim 16 comprising wireless local communication means, and means for positioning the sender by means of said wireless local communication means.

5 22. A message service center comprising means for transferring a message transmitted from the sender's wireless communication device to a wireless communication device of one or more said recipients, and the message service center comprises at least:

- 10 - positioning means for positioning the sender's wireless communication device,
- means for determining the message transmission range from the message to be transmitted,
- detection means for detecting whether the recipient of the message is located within the message transmission range, and
- 15 - presentation means for presenting the message in the recipient's wireless communication device, in case said recipient of the message is located within the message transmission range.

20 23. A wireless communication device, comprising means for determining the recipient, and means for transmitting a location-based message from a wireless communication device to a communication system to be transmitted to a wireless communication device of one or more said recipients, and the wireless communication device further comprises at least range definition means for defining the message transmission range.

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30 24. A wireless communication device, comprising means for receiving from a sender's wireless communication device a location-based message in which the recipient of the message has been defined, and the wireless communication device further comprises:

- storage means for storing said message,
- detection means for detecting whether the recipient of the message is located within the message transmission range, and
- 35 - presentation means for presenting the message in the wireless communication device, in case said recipient of the message is located within the message transmission range.